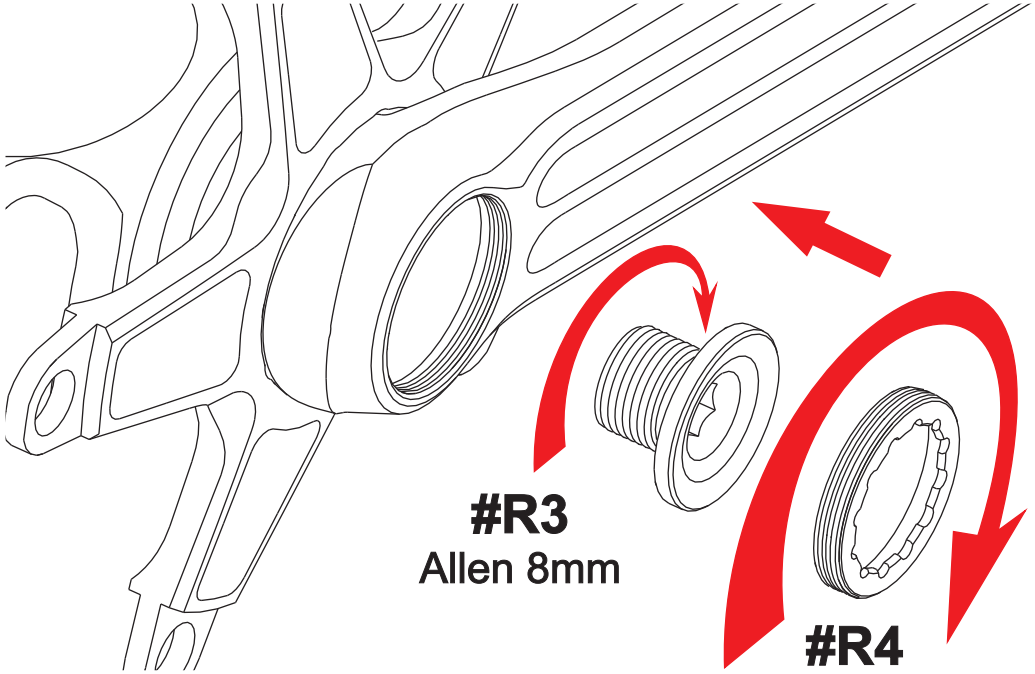
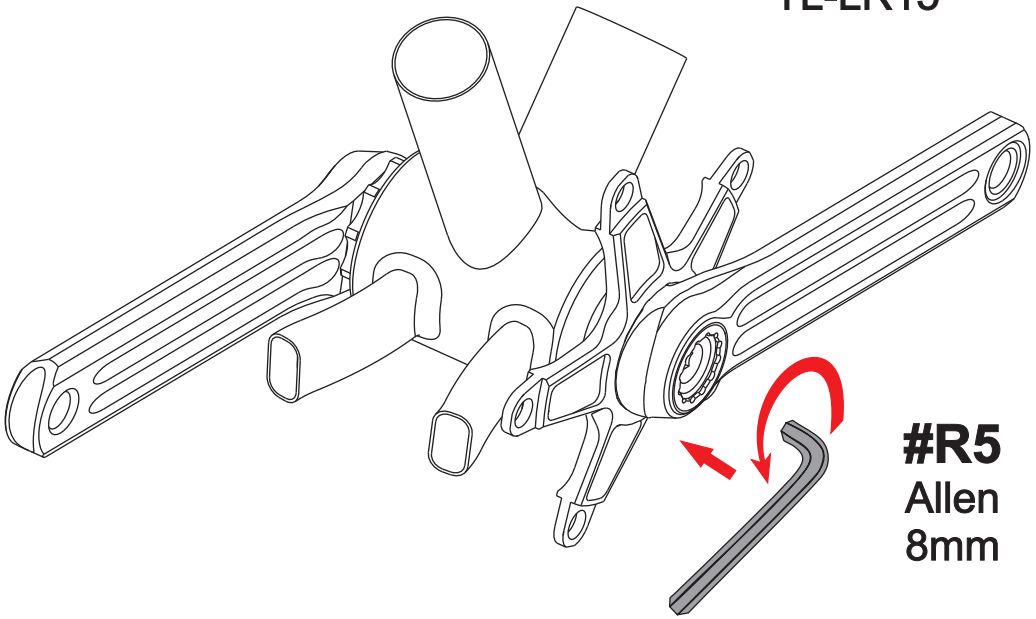
	110 COMPACT DOUBLE	130 CLASSIC DOUBLE	130/74 TRIPLE
WEIGHT (W/O RINGS AND BB) ***PESO (SIN PLATOS Y PEDALIER)***	475 g for 170 mm / 487g for 175 mm	485 g for 170 mm / 497g for 175 mm	501 g for 170mm / 509 g for 175 mm
LENGTHS AVAILABLE ***LONGITUDES***	150, 155, 160, 165, 170, 172, 175, 177 & 180 mm		170, 172 & 175 mm
MANUFACTURE & DESIGN ***FABRICACIÓN Y DISEÑO***	100% CNC, extruded, T6 7075 crank arms with trinity drilling. Black polished crank with laser graphics and red axle bolts. *100% mecanizado CNC, Al 7075 T6 bielas con vaciado por triplicado. Acabado en negro anodizado pulido con gráficos láser y tornillería en negro.*		
TECH SPECS ***ESPECIFICACIONES TÉCNICAS***	Q-Factor 148 mm, Chain line 43,5 mm *148 mm Q-Factor, 43.5 mm Linea de cadena*		Q factor 158,4 mm, Chain line 45,5 mm *158,4 mm Q-Factor, 45,5 mm Linea de cadena*
COMPATIBILITY ***COMPATIBILIDAD***	Ultra stiff 30mm Aluminum UBB axle; compatible with BSA, ITA, BB86, BB30, BB30 PF, BBRight and BB386 Evo frames. See our compatibility chart on pg. 68 *Eje de Aluminio UBB de 30 mm ultra rigido; compatible con cuadros BSA, ITA, BB86, BB30, BB30 PF, BBRight and BB386 Evo. Ver tabla de compatibilidades en pág. 68*		
	For all 110 BCD 10 & 11 speed, oval & round chainrings. *Para todos los grupos de 10 & 11 velocidades con BCD 110 Platos redondos u ovales.*	For all 130 BCD 10 & 11 speed, oval & round chainrings. *Para todos los grupos de 10 & 11 velocidades con BCD 130 Platos redondos u ovales.*	For all 130/74 BCD 10 & 11 speed, oval & round chainrings. *Para todos los grupos de 10 & 11 velocidades con BCD 130 Platos redondos u ovales.*
OPTIONS ***OPCIONES***	Available with MAS optional upgrade, allowing further optimized Q-Ring setup by allowing adjustment increment gaps half that of classic spiders. *disponible opcionalmente con araña MAS (Micro Adjust Spider), que permite un ajuste óptimo con incrementos más pequeños (la mitad) que los de un Q-Ring clásico.*		

CRANKSET REMOVAL (Cont.)





ROTOR COMPONENTES TECNOLÓGICOS SL
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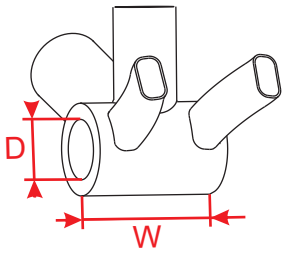
3D+/3DF ROAD BCD 130 / 110. INSTALLATION GUIDE.

BB30 + PressFit30 + BBright + BBright Ca FRAMES

Please note: specifications are subject to change for improvement without notice
Revised: 05/2012

3D+ / 3DF CRANK COMPATIBILITY WITH FRAMES:

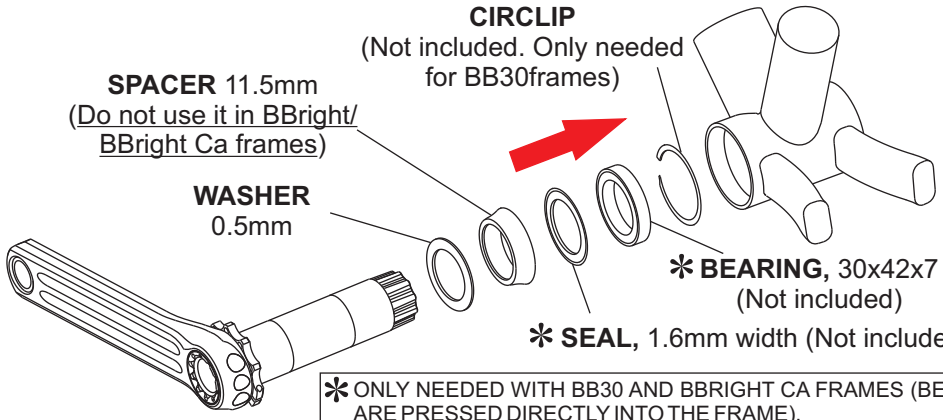


*This user manual is only valid for **BB30**, **PressFit30**, **BBright** and **BBright Ca** road frames.*

	FRAME	W	D	MANUAL´S COMPATIBILITY
1	BB30	68mm	42mm	Follow this user manual instructions
2	Pressfit30	68mm	46mm	
3	BBright	79mm	42mm (BBright Ca) / 46mm (PressFit)	
4	BSA30	68mm	BSA Thread	(Read ROTOR BSA30 cups installation guide)
5	ITA30	70mm	ITA Thread	(Read ROTOR ITA30 cups installation guide)
6	BB86	86,5mm	41mm	(Read ROTOR PF4130 cups installation guide)
7	BB386	86mm	46mm	(Read ROTOR PF4630 cups installation guide)

Bottom bracket not included with cranks package.

#1. Non Drive-side Assembly Installation.

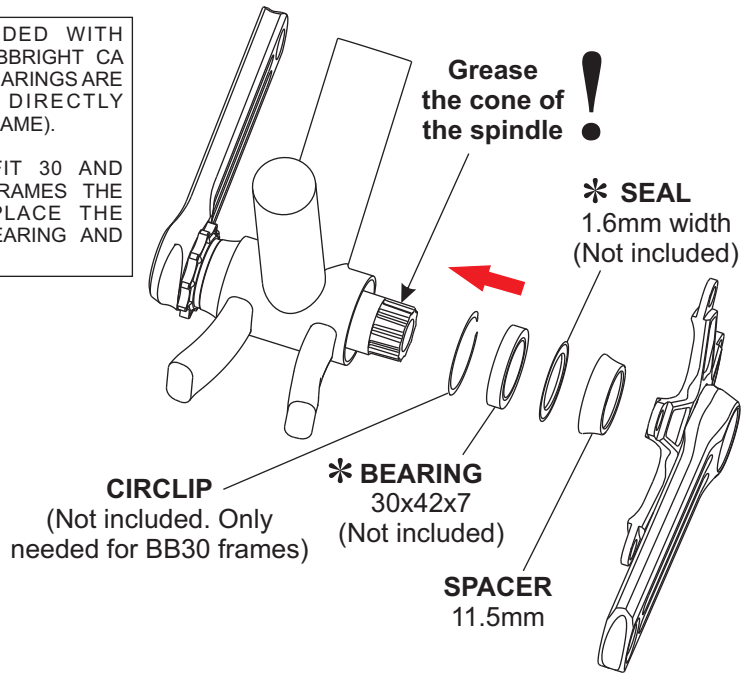


✻ ONLY NEEDED WITH BB30 AND BBRIGHT CA FRAMES (BEARINGS ARE PRESSED DIRECTLY INTO THE FRAME).
IN PRESS FIT 30 AND BBRIGHT FRAMES THE CUPS REPLACE THE BEARING, SEAL AND CIRCLIP.

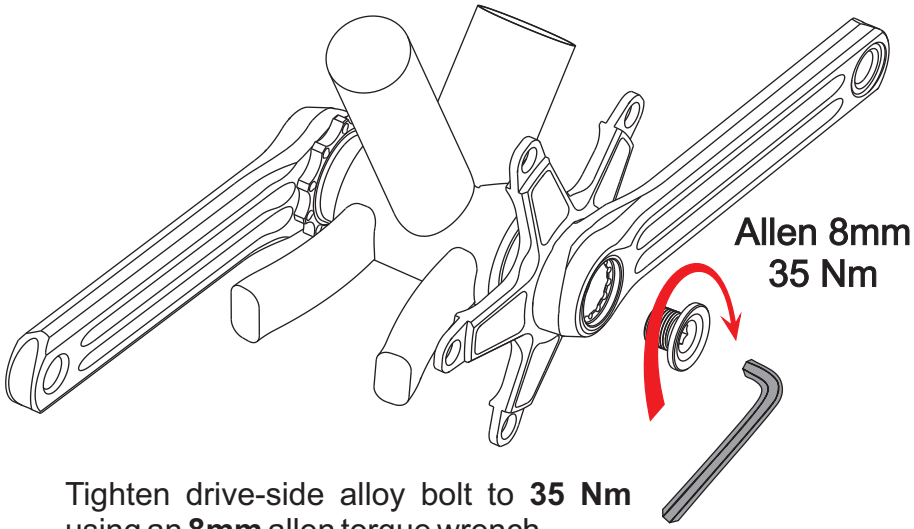
#2. Drive-side Assembly Installation.

✻ ONLY NEEDED WITH BB30 AND BBRIGHT CA FRAMES (BEARINGS ARE PRESSED DIRECTLY INTO THE FRAME).

IN PRESSFIT 30 AND BBRIGHT FRAMES THE CUPS REPLACE THE CIRCLIP, BEARING AND SEAL.

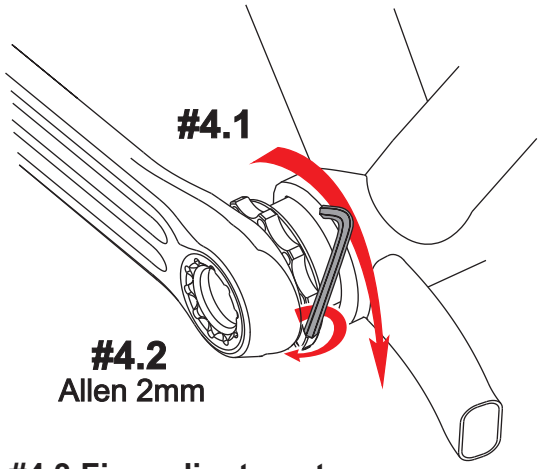


#3. Fixing of Drive-side Assembly.



Tighten drive-side alloy bolt to **35 Nm** using an **8mm** allen torque wrench.

#4. Preload adjustment.



#4.1 Eliminate lateral play by tightening clockwise the preload nut by hand.

#4.2 Lock the preload nut by tightening the pinch bolt clockwise with a 2mm allen wrench.

#4.3 Fine adjustment:

If the crank does not turn smoothly, remove 0,5mm washer in non-drive side and repeat installation steps **#4.1** and **#4.2**

If there is lateral play use an additional 0.5mm plastic washer in the non-drive side.

Ensure preload nut is still threaded in non drive side arm.

CRANKSET REMOVAL

#R1. Remove drive-side alloy bolt.

#R2. Remove drive-side steel nut using a cassette lockring tool (Shimano TL-LR15 or similar).

#R3. Screw the drive-side alloy bolt clockwise into the spindle.

#R4. Flip the drive-side nut over and screw it clockwise into the crank arm to be used as a self-extracting cap. It must be in flush with the outer face of the arm and all of its threads must be engaged.

#R5. Unscrew the drive-side alloy bolt counter-clockwise using a 8mm allen wrench until the drive-side assembly disengages from the spindle.

AVISOS DE SEGURIDAD

El manual de usuario contiene información muy útil e importante acerca de la correcta instalación, uso y mantenimiento de su producto ROTOR. Debe leer, comprender y seguir cuidadosamente las instrucciones que aparecen en dicho manual. Mantenga el manual en un lugar seguro para futuras consultas.
No realice ninguna modificación o ajuste que no esté explícitamente descrita en el manual. Si tuviera alguna duda sobre su capacidad para llevar a cabo la instalación o mantenimiento, por favor, acuda a un taller cualificado.
Una instalación u operación de mantenimiento incorrecta puede reducir drásticamente el rendimiento del producto y podría provocar un accidente con resultado de lesiones o incluso la muerte.
Por favor, lleve su bicicleta regularmente a un taller cualificado para inspeccionar cualquier signo de fatiga, rotura, deformación o exceso de uso. Cualquier componente que se encuentre en mal estado por exceso de uso, fatiga, rotura, deformación o impactos ha de ser reemplazado inmediatamente.
No llevar a cabo un mantenimiento adecuado reduce drásticamente la vida útil del producto así como su rendimiento.
Si tiene cualquier duda, comuníquela en su punto de venta ROTOR más cercano o contacte con info@rotorbike.com.

MANTENIMIENTO

Inspeccione sus componentes ROTOR en busca de impactos, fisuras, pérdida de piezas o deformaciones antes de cada uso, así como después de cada caída. Si hay presencia de algunas de las circunstancias previamente mencionadas, no use sus componentes hasta que no hayan sido sustituidos.

ATENCIÓN: El uso continuado de piezas dañadas, puede ocasionar pérdida de control de la bicicleta, así como daños severos e incluso la muerte.

Es responsabilidad del usuario examinar el producto regularmente para determinar su revisión o sustitución. El ciclista debe inspeccionar la bicicleta, así como sus componentes, con frecuencia para localizar daños producidos por el uso normal o abusivo. Revise, por favor, estos daños después de cada salida.

Controle también periódicamente el apriete correcto de la tornillería, pero no sobreapriete los tornillos.

CONDICIONES DE GARANTIA

- Los productos ROTOR y todos sus componentes están garantizados durante 2 años contra cualquier fallo de fabricación o material defectuoso. En el caso de existir alguna avería durante el periodo de garantía, Rotor Componentes Tecnológicos se compromete a reparar o sustituir el componente o producto defectuoso sin cargo para el cliente. Además, en algunos países, Rotor está obligado a asegurar cualquier garantía legal, definida por la ley de cada país, para la protección del usuario.

- Los componentes con una vida útil limitada por el uso y las roturas no achacables a defectos de fabricación no están cubiertas por esta garantía.

- Fallos o roturas causadas por un uso inapropiado, instalación defectuosa o un mantenimiento inadecuado (según se indica en el manual de usuario) no están cubiertos por esta garantía.

- Conserve su factura de compra, pues le permitirá ejercer su derecho como comprador a la garantía.

- La garantía será anulada en los siguientes casos:
  - Incumplimiento de los requisitos anteriormente mencionados.
  - Instalación inadecuada.
  - Uso negligente o instalación de piezas inadecuadas.

ROTOR BIKE · COMPONENTS

Estas y otras instrucciones de productos ROTOR están disponibles en:
www.rotorbike.com
Rotor Componentes Tecnológicos SL - info@rotorbike.com
Pol. Ind. Conmar. C/Miño, 16-18. 28864 AJALVIR MADRID SPAIN Tel. +34 918843846 Fax. +34 918843865

SAFETY WARNING

This owners manual contains important and useful information regarding the proper installation, operation, care, and maintenance of your ROTOR product. Carefully read, follow and understand the instructions as detailed in this owner's manual. Keep this manual in a safe place for future reference.
If you have any doubt whatsoever regarding your ability to install or service this product, please consult your ROTOR dealer and seek the assistance of a professional bicycle mechanic. Do not perform any modifications or adjustments that are not outlined in this manual.
Incorrect installation or servicing may impair performance, and could result in a dangerous situation leading to serious injury or death.
Components that have experienced excessive wear, deformations or impacts or other damage need immediate professional inspection or replacement.
Please have this product regularly inspected by a qualified mechanic for any signs of wear or damage.
Failure to perform necessary and essential maintenance could drastically reduce the service life of your ROTOR product and reduce its performance.
If you have any questions, please contact a professional bike mechanic or your nearest ROTOR dealer for additional information.

Caution!: Please consult the relevant manufacturer's instruction manuals for your BB set or pedals, If necessary, consult their technical service department for the correct installation procedure.

MAINTENANCE

Inspect your ROTOR product for wear, looseness or damage including cracks, dents and serious scratches, before each ride and after every fall or crash. Do not use your ROTOR product until it has been thoroughly inspected, repaired or replaced.
WARNING: Continuing to use damaged parts may lead to loss of control and cause serious injury or death.

Cyclists should inspect their whole bicycle and parts on a regular basis or consult with a professional bicycle mechanic, to determine the need for service, or replacement and to detect damage that may have occurred from normal use.
Check all parts for damage and wear before every use. Check the bolts and other fasteners periodically for tightness. Ensure they are tightened to the correct torque values.

ROTOR WARRANTY POLICY:

ROTOR BIKE · COMPONENTS

- The ROTOR products and its components are guaranteed for 2 YEARS against any manufacturer defects or defective materials. In the event of a warranty defect, Rotor´s sole obligation under this warranty is to repair or replace, at its option, the defective part or product at no charge. Moreover, in some countries, Rotor is obliged to ensure any legal warranty defined by law for the customer's protection.

- Elements subject to wear and breakdowns that the manufacturer is not responsible for, are not covered by this warranty.

- Failures or breakdowns caused by improper use, poor assembly or inadequate maintenance as declared in the supplied instructions or the user manual are not covered by this warranty.

- Always keep your receipt or invoice.

- The following acts void this warranty:
  - Failure to fulfil the requirements above.
  - Improper installation.
  - Improper use or installation of inadequate parts.

Warranty Service: Original purchaser must send their Rotor product along with the retailer's original bill, credit card receipt or other satisfactory proof of date of purchase of the product.

These instructions and instructions for other Rotor Bike Components products are available for download at:
www.rotorbike.com
Rotor Componentes Tecnológicos SL - info@rotorbike.com
Pol. Ind. Conmar C/Miño, 16-18. AJALVIR MADRID SPAIN Tel. +34 918843846 Fax. +34 918843865